Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_ Per.: \_\_\_\_\_\_\_\_

**Unit 2 Overview**

**UNIT 2 TEST DATE: Thursday, November 19**

**2.1 Conditionals** (*if/then statements, converse, inverse, etc.*)

**2.2 Truth Value** (*always, sometimes, or never true? counter examples!)*

**2.3 Algebraic Proofs**

**2.4 Congruence versus Equality** (*What is the difference? How is notation different?*)

**2.5 Segment Addition** (*using segment addition to solve problems involving variables… midpoint included!*)

**2.6 Coordinate Geometry** (*finding midpoint and distance given two points on the coordinate plane*)

**2.7 Partitioning a Line Segment**

**2.8 Vertical Angles and Linear Pairs**

**2.9 Parallel Lines Cut by a Transversal** (*angle pairs – same side interior, etc.*)

**2.10 Assumptions in Geometric Diagrams and Justifying Conclusions**

**2.11 Proving Angle Theorems** (*vertical angles theorem, complements and supplements theorem*)

**2.12 Proving Theorems Related to Parallel Lines Cut by a Transversal**

**2.13 Proving CONVERSES of Theorems Related to Parallel Line Cut by a Transversal**

**2.14 General Angle Proofs**

Creating your study guide…

* 2.1
  + Find definitions of conditional, converse, inverse, hypothesis and conclusion
  + Find examples of each for practice.
* 2.2
  + Find examples of “truth value”. Be sure you can determine whether a conditional, converse, **and** an inverse are always, sometimes, or never true. You will need to be able to explain a counter example if the statement is **not always** true.
* 2.3
  + Find the properties of equality used in algebraic proofs (subtraction property of equality, substitution property of equality, etc.). You do not need be able to recall definitions but you will need to know when to use them.
  + Find examples of algebraic proofs to practice.
* 2.4
  + Find your notes on congruence versus equality, which highlight the differences between the two. They will also provide a refresher as to the correct notation for each.
  + Be sure you understand that congruence and equality also have a lot in common.
* 2.5
  + Find examples of using the segment addition postulate to solve problems involving variables.
  + Review all of the relationships you can determine when given the **midpoint** of a line segment.
  + Find examples of using **midpoint** to solve problems involving variables.
* 2.6
  + Identify the formulas for finding the midpoint and distance between two points on the coordinate plane.
  + Understand that the concept of midpoint comes from finding **averages** and that the concepts of distance derives from the Pythagorean Theorem
  + Find examples of finding midpoint and distance given coordinate points.
  + We will review the concept of finding an endpoint given a midpoint **together** (you worked on this with Mrs. Lee when I was out).
* 2.7
  + Find examples of partitioning a line segment created by two coordinate points into a specific ratio (1:3, 2:1, etc.)
* 2.8
  + Be able to identify vertical angles and linear pairs.
  + Find examples of problems involving variables and vertical angles or linear pairs.
  + Know that vertical angles are congruent and linear pairs are supplementary!
* 2.9
  + Be able to identify pairs of angles created by a transversal.
  + Be able to justify whether or not lines are parallel given information about one or more of these angle pairs in a diagram.
  + Find examples of solving problems involving variables and transversals.
* 2.10
  + Be able to identify assumptions you **can** and **cannot** make from a geometric diagram.
* 2.11
  + Be able to prove TWO of the following:
    - Vertical Angles Theorem
    - Congruent Complements Theorem
    - Congruent Supplements Theorem
* 2.12
  + Be able to prove ONE alternate and ONE same side:
    - Alternate Exterior Angles Theorem
    - Alternate Interior Angles Theorem
    - Same Side Exterior Angles Theorem
    - Same Side Interior Angles Theorem
* 2.13
  + Be able to prove the CONVERSE of ONE alternate and ONE same side theorem in 2.12
* 2.14
  + Find examples of angle proofs to practice.